targets the whole metabolome. The paper will discuss the possibilities and challenges of using this technique in quality assessment of cultivated South African medicinal plants.

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Taxonomy and conservation of *Marasmodes* (Asteraceae, Anthemideae): A highly threatened and often overlooked genus endemic to the Cape Floristic Region

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Marasmodes DC. is a genus of rather inconspicuous woody shrubs with sclerophylous ericoid leaves and sessile discoid flower heads. The species flower during the dry autumn months and are rather indistinguishable from the surrounding vegetation when not in flower. As a result they have been largely overlooked and poorly collected. Prior to 2009 only four species were recognised. In the last three years these have been teased apart, with nine species newly described, so the genus now comprises 11 species. However, a thorough taxonomic revision of the genus is required to assess the status of the four original species in relation to the slew of newly described taxa, as well as to provide a comprehensive taxonomic key to identify them. They are all highly localised and largely found in agricultural landscapes where there is significant development pressure. Consequently they are also all considered to be highly threatened and two are possibly already extinct. It is for these reasons that CREW (Custodians of Rare and Endangered Wildflowers) dedicate a day each year, Marasmodes Day, focused on locating species of this genus. Through this program and targeted fieldwork as part of the revision almost all of the species have been located and studied *in situ*, another three new species discovered, and *M. beyersiana* S.Ortiz revealed to be a synonym of *M. polycephala* DC. A taxonomic revision of the genus, in which we now recognise 15 species, along with a reassessment of their conservation statuses is presented.

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The Bews Virtual Herbarium (NU): Introduction to a useful resource via BRAHMS-online

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In keeping with international trends towards digitisation of biological collections, the staff of the Bews Herbarium (NU) on the Pietermaritzburg campus of University of KwaZulu-Natal, migrated its existing database from PRECIS to BRAHMS in 2011. BRAHMS (Botanical Research and Herbarium Management System) was designed by Denis Filer of University of Oxford to be a free, flexible and powerful tool for use by botanical researchers and herbarium workers. It allows the herbarium database to be published to a searchable web site, which provides a useful service to users of botanical information. About 30 000 botanical records in the BRAHMS database of Bews Herbarium are currently available through the BRAHMS portal at the following link: http://herbaria.plants.ox.ac.uk/bol/nu. About one fifth of the estimated 150 000 records in Bews Herbarium is accessible through BRAHMS, and continued efforts are made to increase this percentage. A large proportion of records were converted from PRECIS to the new BRAHMS format, but new digitisation efforts are adding new and old records in the BRAHMS format. Specimens and specimen labels are photographed for data capture, which means that both photographs and data are available for consultation by researchers. Data is easily exported in Excel format and localities are available in Google Map/Earth format. The basic features, lay-out and functionality of the web site will be demonstrated to show how its use can benefit research.

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The development of an accurate DNA-based identification tool for traded and protected tree species in Southern Africa

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A prerequisite for efficient control and seizure of illegally harvested forest products is a rapid and accurate method of identification. However, most producing nations still rely on slow and in some cases intense limited morphological identification practices. The current and rapid development of DNA barcoding techniques is acknowledged to bring about accuracy and efficiency in species identification. The main objective of this project is to generate a DNA barcode library for traded and protected trees, and test the efficacy of DNA barcode in discriminating timber species. Furthermore, the project also successfully explores the recent progress in DNA isolation from unconventional materials. Our current library represents a database of 109 species representing 10 genera for which the standard barcoding regions *matK* and *rbcLa* are generated. This database can serve as a backbone to a better control mechanism based on DNA techniques for species identification and also advances the ability of relevant authorities to rapidly identify species of timber at entry and exit points between countries with simple but fast and accurate DNA techniques.

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A geobotanical investigation of the Koedoesfontein Complex in the Vredefort Dome

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The Vredefort Dome hosts several unique dioritic to ultramafic intrusive bodies, which were emplaced into the core and collar of the dome. Differences in the mineralogy of these intrusions can produce various weathering products and abrupt transitions in soil characteristics. This ultimately affects the floristic and physiognomic characteristics of the associated vegetation. There is insufficient knowledge of the geological factors that determine species occurrences and abundance on various geological formations. The primary aim of this study was to broaden our knowledge by investigating one of the ultramafic complexes in the dome, namely the Koedoesfontein